user's guide to

Ready for PIC

BOX edition



Best solution for fast and simple development of applications using 28- and 40-pin PIC devices.

MikroElektronika
DEVELOPMENT TOOLS | COMPILERS | BOOKS

TO OUR VALUED CUSTOMERS

I want to express my thanks to you for being interested in our products and for having confidence in Mikroelektronika.

The primary aim of our company is to design and produce high quality electronic products and to constantly improve the performance thereof in order to better suit your needs.

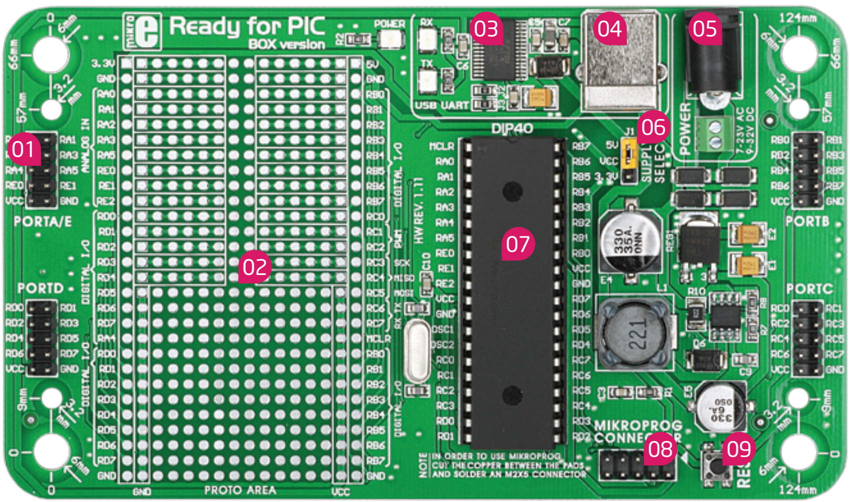


Nebojsa Matic
General Manager

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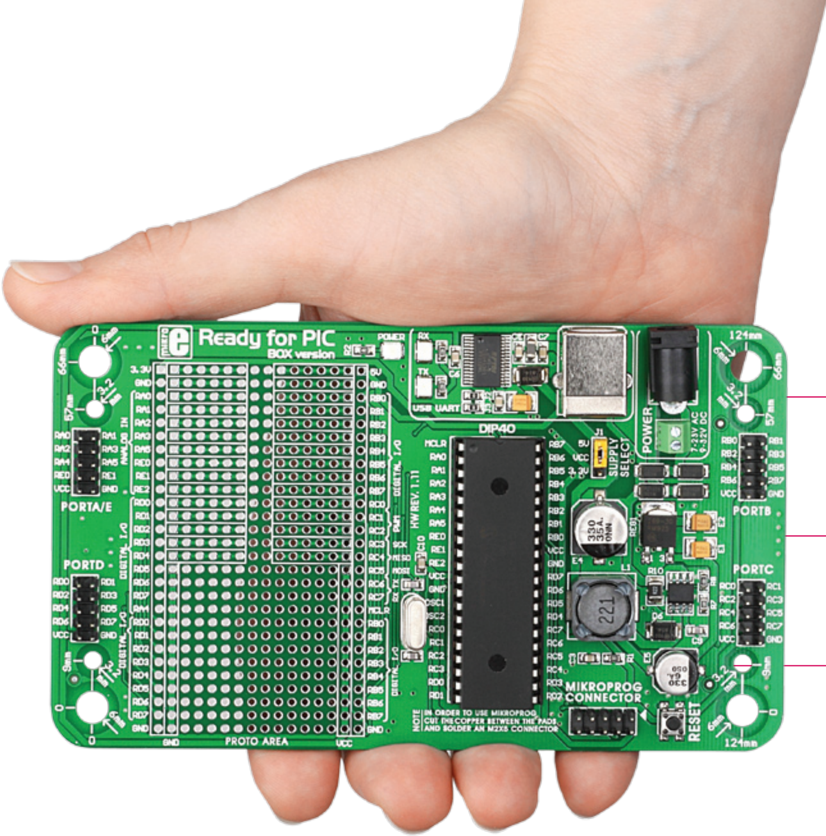
Introduction to Ready for PIC

Ready for PIC is a compact development tool for device development based on PIC microcontrollers. Board is equipped with **PIC16F887** MCU that is placed in DIP40 socket. Instead of **DIP40** socket you can solder one for microcontrollers in **DIP28** package. To program PIC16F887 MCU you can use preinstaled **bootloader** or external programmer (**mikroProg for PIC, dsPIC and PIC32**). For easy access to MCU pins there are four 2x5 male headers that are marked with name of the MCU pin for which they are attached.



Key features

- 01 2x5 male header
- 02 PROTO board section
- 03 USB UART module
- 04 USB connector
- 05 AC/DC connector
- 06 Power supply selector
- 07 PIC16F887 in DIP40 socket
- 08 2x5 male header for mikroProg
- 09 RESET button



System Specification

power supply

Via AC/DC connector 7-23V AC or 9-32V DC

power consumption

~25mA (depends of placed MCU and attached devices)

board dimensions

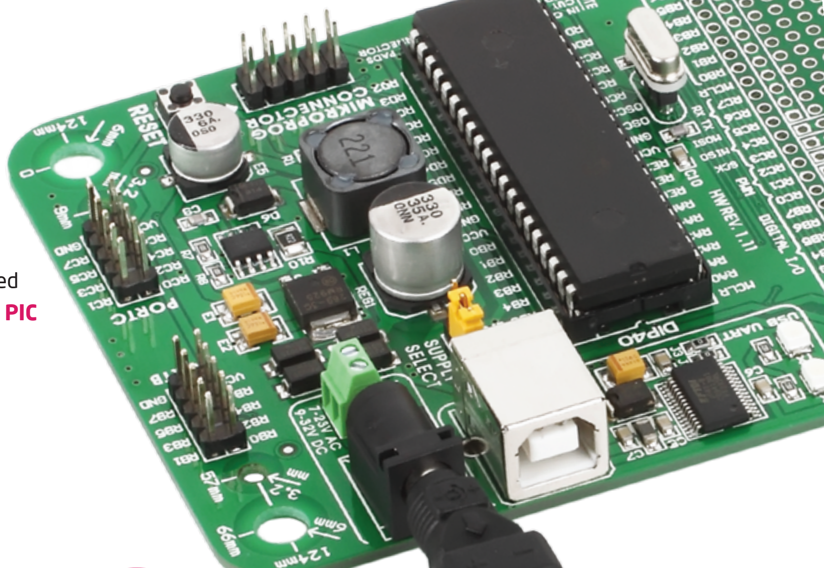
140 x 82mm (5.51 x 3.22")

weight

~67g (0.15 lbs)

1. Power Supply

To power up **Ready for PIC** board connect it with power supply source via AC/DC connector or via screw terminal, Figure 1-2. Power supply voltage can vary from 7 to 23V AC or 9 to 32V DC. There's no need for voltage polarity orientation because **Ready for PIC** has diode bridge rectifier on-board.



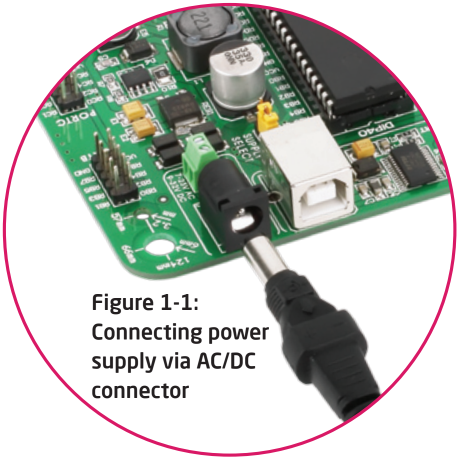


Figure 1-1: Connecting power supply via AC/DC connector

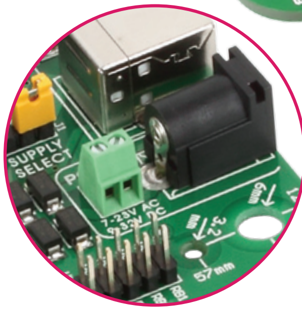


Figure 1-2: Power supply screw terminal

Voltage supply selector



Place jumper in 5V position in order to use MCU that use 5V power supply

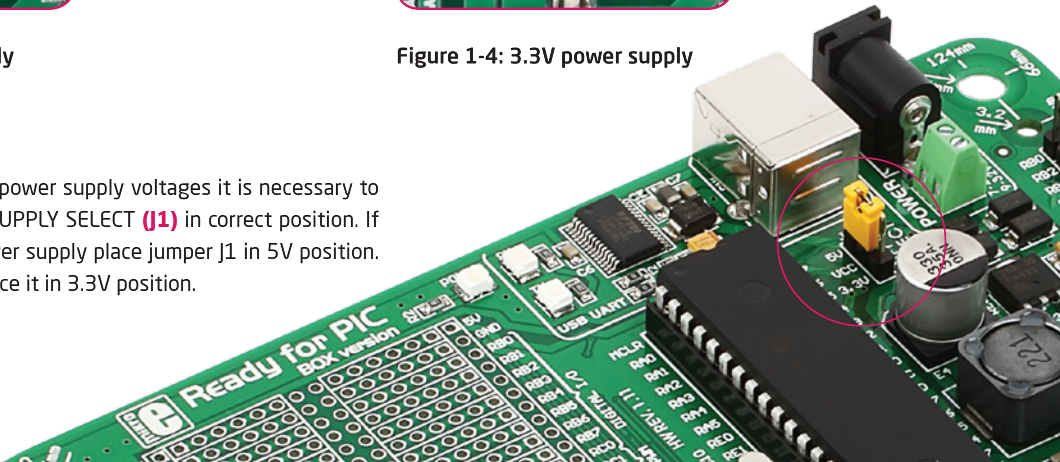
Figure 1-3: 5V power supply



Place jumper in 3.3V position in order to use MCU that use 3.3V power supply

Figure 1-4: 3.3V power supply

To use MCUs with different power supply voltages it is necessary to place jumper marked with SUPPLY SELECT **(J1)** in correct position. If you use MCU with a 5V power supply place jumper J1 in 5V position. Otherwise, for 3.3V MCU place it in 3.3V position.



2. Programming MCU

If you want to use external programer prior to bootloader on PIC16F887 (or any other MCU) you need to make few adjustments. First you need to cut copper between pads for the external programmer, Figure 2-1. By doing so it will be made separation between pins RB6, RB7, MCLR and VCC on MCU and from rest of the board. After cut is made it's time to solder the 2x5 male header to the pads CN5, Figure 2-2. Now it's time to place external programer's ICD10 connector on 2x5 male header, Figure 2-3. After programming process is finished remove programer's connector and place jumpers over pins on 2x5 male header in order to use pins RB6, RB7 and MCLR on rest of the board.

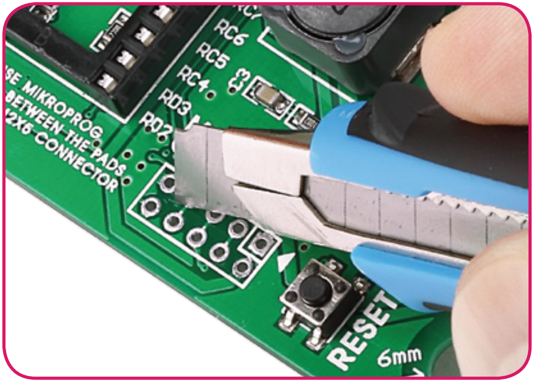


Figure 2-1: Make a cut before 2x5 header is placed

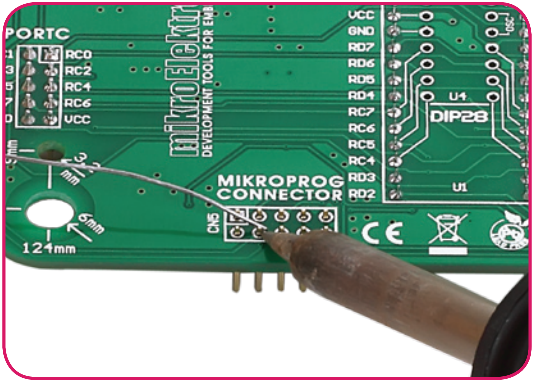
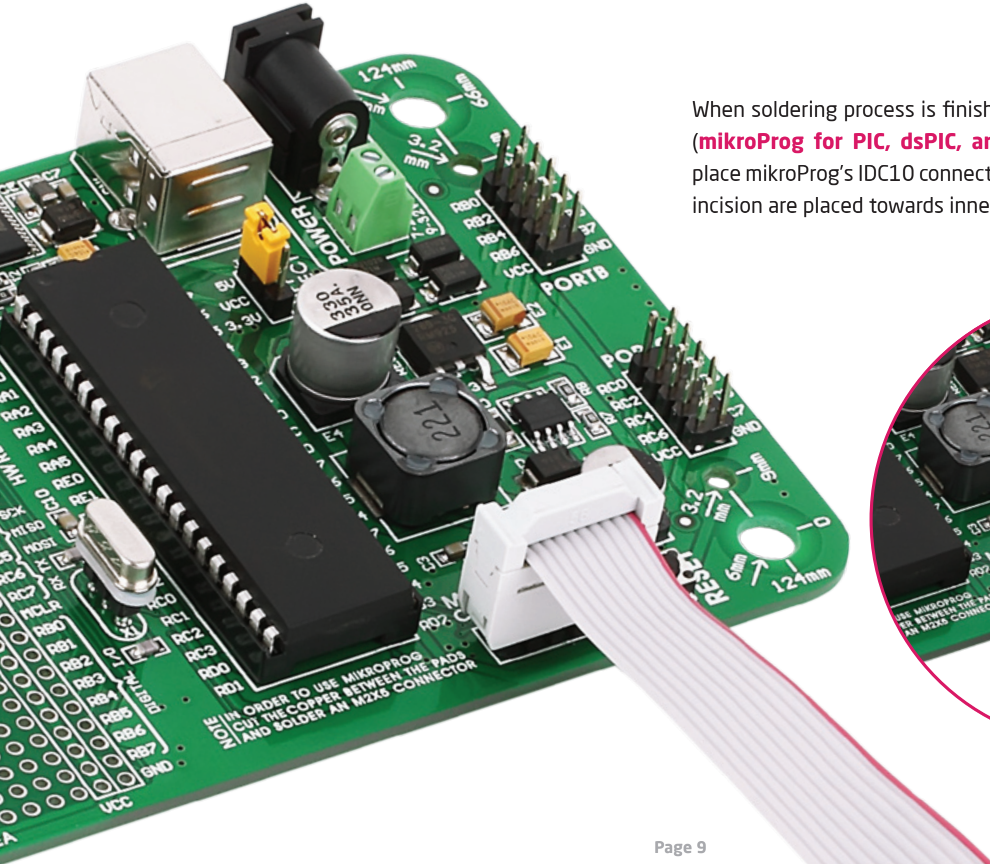


Figure 2-2: Solder 2x5 male header

When soldering process is finished you can use external programer (**mikroProg for PIC, dsPIC, and PIC32**) for MCU programing. To place mikroProg's IDC10 connector properly make sure that knob and incision are placed towards inner side of the board, Figure 4-3.



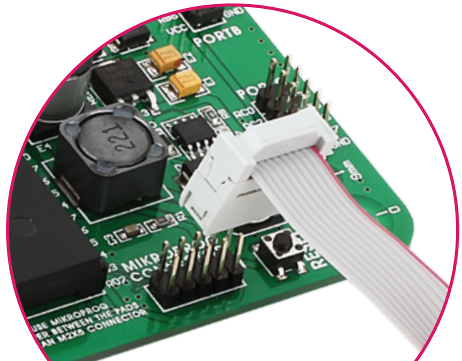
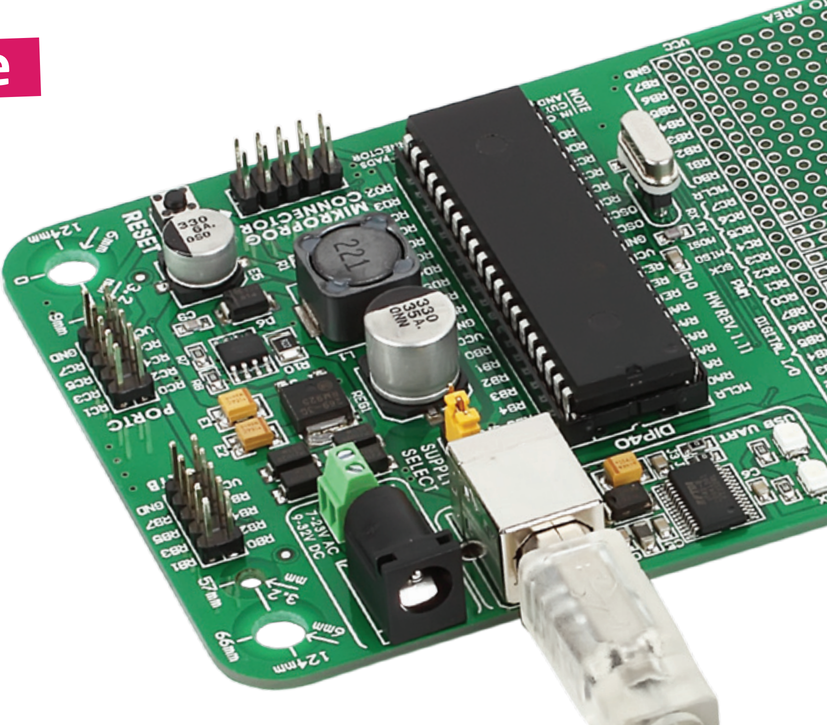


Figure 2-3: Connecting external programmer

3. USB UART module

Development tool can communicate with USB devices via USB UART module. This module comes in form of **FT232RL** chip which is interface between serial UART on MCU and USB device.



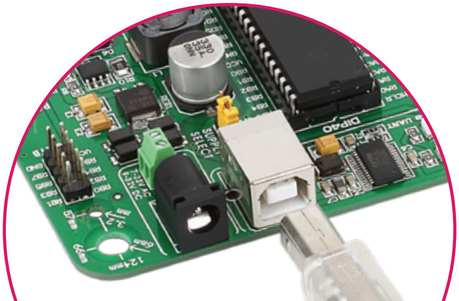
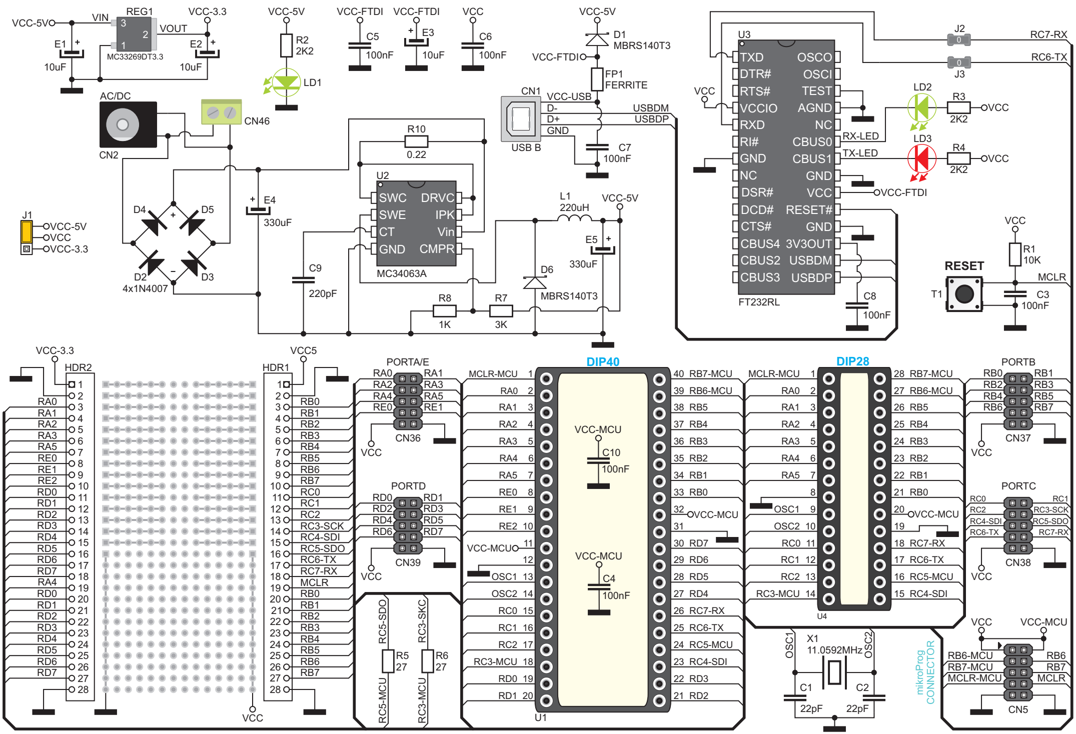


Figure 3-1: Connecting USB cable with USB UART module

When data transfer via USB UART module is active a LEDs marked with Rx and Tx will flicker

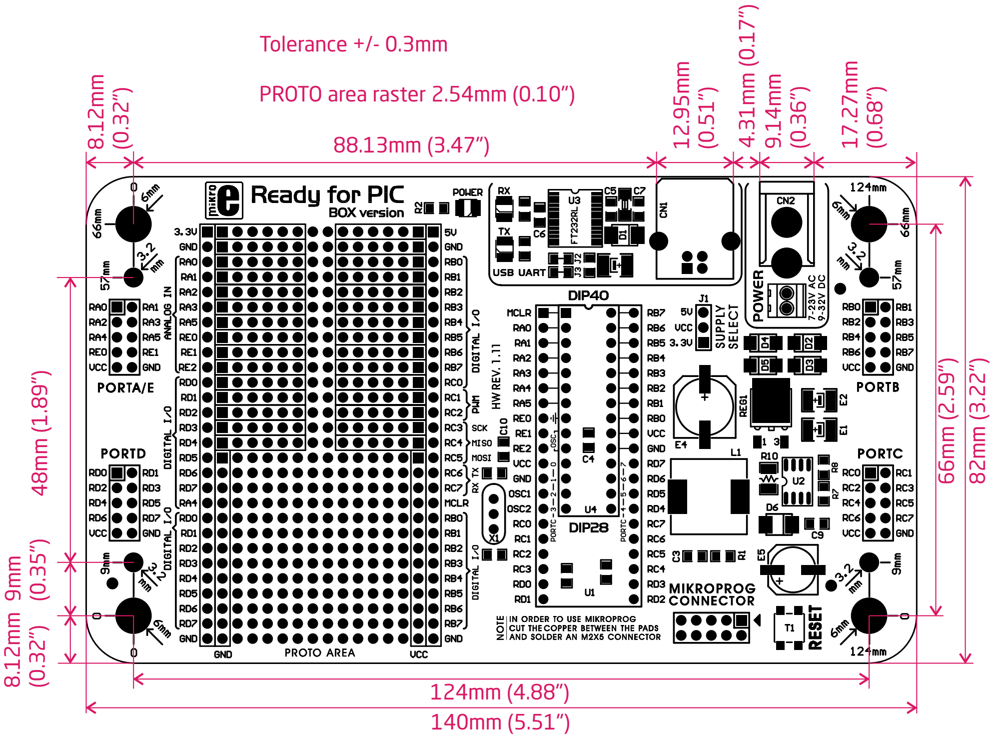
4. Board schematic



5. Board dimensions

Tolerance +/- 0.3mm

PROTO area raster 2.54mm (0.10”)



Notes:

Notes:

DISCLAIMER

HIGH RISK ACTIVITIES

TRADEMARKS

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BOX edition

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